europass Curriculum vitæ

PERSONAL INFORMATION

Dr. Matteo Tommasini

✉ matteo.tommasini2@gmail.com

🖥 matteotommasini.altervista.org

in linkedin.com/in/matteotommasini

Ⓢ matteo.tomm

WORK EXPERIENCE

29/04/2015 - 20/05/2015 — **High school teacher of mathematics**

Upper secondary school "Istituto Tecnico Agrario Arrigo Serpieri" (Bologna, Italy)

Teaching basis of mathematics (from Set Theory to Calculus I) and supervision for high school students (classes 1D, 2D, 3B, 4B and 5B)

02/04/2013 - 31/03/2015 — **Post-doc (Marie Curie Fellow)**

Mathematics Research Unit, University of Luxembourg

Independent research in Algebraic and Differentialn Geometry - identification of key features of some complex mathematical problems; solutions of such problems by decomposition into easier tasks; dissemination of results via peer reviewed preprints and publications; presentations of results through illustrations created via LaTeX programming packages; presentations of results during conferences with a broader international audience; supervision of undergrad students; research collaborations with fellow researchers both on-site and abroad

01/10/2012 - 28/02/2013 — **Post-doc (Riemann Fellow)**

Riemann Center for Geometry and Physics, Leibniz Universität Hannover, Germany

Independent researcher in Algebraic Geometry - same job description as above

01/10/2009 - 25/10/2012 — **Ph.D. in Geometry**

International School of Advanced Studies (SISSA-ISAS), Trieste, Italy

Supervised paid research in Algebraic and Differential Geometry; delivery of a final thesis summing up original findings; development of problem-solving skills and timelines management; group interactions with fellows Ph.D. candidates and full professors; exchange of know-how and knowledge with the aforementioned researchers

01/01/2007 - 31/05/2007 — **Private lecturer of mathematics and physics**

Upper secondary school "Liceo Scientifico Marcello Malpighi" - Bologna, Italy

After-school activities organized by the school

05/10/2005 - 10/06/2007 — **Private lecturer of mathematics and physics**

Private lessons of mathematics and physics for students of secondary school and University in Bologna

01/10/2005 - 30/06/2006 — **Private lecturer of mathematics and physics**

Group "La bussola - Onlus", Crevalcore (BO), Italy

After-school activities for students of secondary school

EDUCATION AND TRAINING

05/03/2017 - 06/03/2017	**Online course "Introduction to HTML5"** Certificate obtained by University of Michigan (via the Coursera platform)
25/11/2016 - 08/12/2016	**Online course "Developing Data Products"** Certificate obtained by Johns Hopkins University (via the Coursera platform)
11/11/2016 - 30/11/2016	**Online course "Practical Machine Learning"** Certificate obtained by Johns Hopkins University (via the Coursera platform)
3/11/2016 - 23/11/2016	**Online course "Regression Models"** Certificate obtained by Johns Hopkins University (via the Coursera platform)
18/10/2016 - 04/11/2016	**Online course "Statistical Inference"** Certificate obtained by Johns Hopkins University (via the Coursera platform)
09/10/2016 - 19/10/2016	**Online course "Reproducible Research"** Certificate obtained by Johns Hopkins University (via the Coursera platform)
30/09/2016 - 10/10/2016	**Online course "Exploratory Data Analysis"** Certificate obtained by Johns Hopkins University (via the Coursera platform)
20/09/2016 - 04/10/2016	**Online course "Getting and Cleaning Data"** Certificate obtained by Johns Hopkins University (via the Coursera platform)
12/09/2016 - 20/09/2016	**Online course "R programming"** Certificate obtained by Johns Hopkins University (via the Coursera platform)
11/09/2016 - 13/09/2016	**Online course "The Data Scientist's Toolbox"** Certificate obtained by Johns Hopkins University (via the Coursera platform)
04/09/2016 - 12/12/2016	**Online specialization "Python for Everybody"** Certificate obtained by University of Michigan (via the Coursera platform)
25/11/2016 - 12/12/2016	**Online course "Capstone: Retrieving, Processing, and Visualizing Data with Python"** Certificate obtained by University of Michigan (via the Coursera platform)
12/10/2016 - 25/11/2016	**Online course "Using Databases with Python"** Certificate obtained by University of Michigan (via the Coursera platform)
29/09/2016 - 12/10/2016	**Online course "Using Python to Access Web Data"** Certificate obtained by University of Michigan (via the Coursera platform)

6/09/2016 - 22/09/2016	**Online course "Python Data Structures"**
	Certificate obtained by University of Michigan (via the Coursera platform)
4/09/2016 - 6/09/2016	**Online course "Getting Started with Python"**
	Certificate obtained by University of Michigan (via the Coursera platform)
23/08/2016 - 19/09/2016	**Online course "C++ For C Programmers, Part B"**
	Certificate obtained by University of California, Santa Cruz (via the Coursera platform)
21/02/2016 - 10/03/2016	**Online course "C++ For C Programmers, Part A"**
	Certificate obtained by University of California, Santa Cruz (via the Coursera platform)
13/10/2015 - 16/03/2017	**German courses for the European A2, B1, B2 and C1 levels**
	Sprachenzentrum, Universität Wien, Austria
01/08/2015 - 30/09/2015	**Autonomous study for the A1 level of German**
01/10/2009 - 25/10/2012	**Ph.D. in Geometry**
	International School of Advanced Studies (SISSA-ISAS), Trieste, Italy
	thesis: "The Hodge-Deligne polynomials of some moduli spaces of coherent systems"
	supervisor: Prof. Peter E. Newstead
01/10/2007 - 24/09/2009	**Master's degree in Mathematics**
	Department of Mathematics, University of Trieste, Italy und SISSA, Trieste, Italy
	thesis: "Orbifolds and groupoids"
	supervisors: Prof. Emilia Mezzetti and Prof. Barbara Fantechi
	mark: 110/110, with honours
01/10/2004 - 20/07/2007	**Bachelor's degree in Mathematics**
	Department of Mathematics, University of Bologna, Italy
	thesis: "Curve ellittiche" (Elliptic curves)
	supervisor: Prof. Monica Idà
	mark: 110/110, with honours
16/09/1999 - 24/06/2004	**High school diploma**
	Upper secondary school "Liceo Linguistico Marcello Malpighi", Bologna, Italy
	mark: 100/100, with honours

AWARDS AND HONOURS

11/02/2015	"Qualification à maître de conférence" (abilitation to be hired for permanent academic positions in the French University system) Ministère de l'éducation nationale, de l'enseignement supérieur et de la recherche - France
03/12/2012	Winner of an AFR grant for independent research for 2 years as post-doc Marie Curie Fellow FNR (Fond National de la Recherche), Luxembourg
15/12/2010	Winner of an Erasmus Placement Fellowship for a 3 months stay in Cambridge International School of Advanced Studies (SISSA - ISAS), Trieste, Italy
16/07/2009	Winner of a 3 years scholarship for the Ph.D. program in Geometry International School of Advanced Studies (SISSA-ISAS), Trieste, Italy
01/10/2009	Diploma supplement "Formative Curriculum Certificate" (awarded after successful completion in at most 2 years of a Master Degree with average grades above 27/30, and no grades below 24/30) International School of Advanced Studies (SISSA-ISAS) and University of Trieste, Italy
16/09/2007	Winner of a 2 years scholarship for the Master in Mathematics International School of Advanced Studies (SISSA-ISAS) and University of Trieste, Italy

VISITING POSITIONS

12/01/2015 - 13/02/2015	Invited participant to the Concentration period "Moduli spaces and derived categories" Department of Mathematics, University of Warwick, UK
04/01/2012 - 05/02/2012, 24/02/2012 - 26/03/2012	Visiting student, Department of Mathematical Sciences, University of Liverpool, UK
03/04/2011 - 01/07/2011	Visiting student, Isaac Newton Institute for Mathematical Sciences, Cambridge, UK

MATH RESEARCH ACTIVITY

As a mathematician I mainly worked in the areas of differential and algebraic geometry, and category theory.

My most recent research activity was focused on the constructions of bicategories of fractions, the proof of the existence of weak fiber products in this framework and the relation between certain bicategories of fractions and differentiable orbifolds.

Another important result of my previous work was the computation of the Hodge-Deligne polynomials (hence, of the cohomology) of some moduli spaces of coherent systems. Such spaces are parametrized by a real number and they remain constant in intervals. The aim was to describe how such spaces vary when crossing any critical value.

PUBLICATIONS AND PREPRINTS

Publications
▷ *Orbifolds and groupoids*, "Topology and its Applications", Vol. 159 (3), pp. 756 – 786, doi: 10.1016/j.topol.2011.11.043, arXiv math.AT 1008.0988

▷ *Some insights on bicategories of fractions: comparison results, associators and compositions of 2-morphisms*, "Theory and Applications of Categories", arXiv math.CT 1410.3990

▷ *A bicategory of reduced orbifolds from the point of view of differential geometry*, "Journal of Geometry and Physics", Vol. 108 (2016), pp. 117 – 137, doi: 10.1016/j.geomphys.2016.03.025, arXiv math.CT 1304.6959

Preprints	▷ *Universal families of extensions of coherent systems*, arXiv math.AG 1212.0125
	▷ *Right saturations and induced pseudofunctors between bicategories of fractions*, arXiv math.CT 1410.5075
	▷ *Equivalences of bicategories of fractions*, arXiv math.CT 1410.6395
	▷ *Weak fiber products in bicategories of fractions*, arXiv math.CT 1412.3295
	▷ *Atlases for Ineffective Orbifolds* - in collaboration with Dorette Pronk and Laura Scull, arXiv math.CT 1606.04439
	For more information on the previous papers (and links to direct downloads), see http://matteotommasini.altervista.org/publications
Preprints available on request	▷ *Wallcrossing for the moduli spaces of coherent systems of type (2,d,2) - the odd case*
	▷ *Wallcrossing for the moduli spaces of coherent systems of type (2,d,2) - the even case*
Papers in preparation	▷ *A bicategory of reduced orbifolds from the point of view of differential geometry - II*
	▷ *Weak fiber products of differentiable stacks*
	▷ *The Hodge-Deligne polynomials of the moduli spaces of coherent systems $G(\alpha; 2, d, 1)$ and $G(\alpha; 3, d, 1)$*

INVITED TALKS

20/20/2012	University of Liverpool, UK
30/05/2012	University of Zürich, Switzerland
24/10/2012	University of Trieste, Italy

TALKS AT SCHOOLS AND CONFERENCES

26/01/2015	Department of Mathematics, University of Warwick, UK
	Concentration period "Moduli spaces and derived categories"
20/06/2013	International School of Advanced Studies (SISSA-ISAS), Trieste, Italy
	2013 VBAC conference "Hilbert schemes, sheaves and representations"

OTHER SEMINARS/LECTURES

Many seminars at the Leibniz Universität Hannover, Germany and at the International School of Advanced Studies (SISSA-ISAS), Trieste, Italy. For a complete list, see http://matteotommasini.altervista.org/talks

TEACHING

For more info about some of these courses (and lecture notes in pdf), see http://matteotommasini.altervista.org/teaching

Analysis 3B

24/09/2014 - 17/12/2014	University of Luxembourg - Exercise classes for for the Bachelor in Engineering and Physics, in French

Curriculum vitæ - Dr. Matteo Tommasini

Euclidean, non-euclidean and projective geometry

26/02/2014 - 12/06/2014   University of Luxembourg - Exercise classes for the Bachelor in Mathematics, in English

Orbifolds and 2-categories

13/05/2013, 23/05/2013, 03/06/2013   University of Luxembourg - Mini-course for Ph.D. students, in English

Introduction to (algebraic) Deligne-Mumford stacks

17/10/2013, 24/10/2013, 31/10/2013, 07/11/2013, 14/11/2013   University of Luxembourg - Mini-course for Ph.D. students, in English

Introduction to algebraic (Deligne-Mumford) stacks

07/12/2011, 14/12/2011, 07/02/2012   International School of Advanced Studies (SISSA-ISAS), Trieste, Italy
Mini-course for Ph.D. students, in English

Prime numbers and cryptography

01/03/2007 - 31/05/2007   Secondary upper school "Dante Alighieri", Ravenna, Italy

Mini-course for students of secondary high school, in Italian

WORK-RELATED ACTIVITIES

08/01/2014 - now	Peer referee for "Topology and its Applications" (Elsevier)
26/01/2015 - now	Peer referee for "Journal of Geometry and Physics" (Elsevier)
01/10/2013 - 31/03/2015	Organizer of the weekly "General mathematics seminar" of the University of Luxembourg
01/01/2010 - 12/31/2016	Member of the Italian Mathematics Association ("Istituto Nazionale di Alta Matematica Francesco Severi - INdAM")

SCHOOLS AND CONFERENCES ATTENDED

19/10/2015 - 23/10/2015	Workshop "Higher topological quantum field theory and categorical quantum mechanics"
	Erwin Schrödinger Institute (ESI), Vienna, Austria
01/09/2014 - 05/09/2014	2014 VBAC conference "Algebraic Varieties: Bundles, Topology, Physics"
	Freie Universität Berlin, Germany
16/06/2014 - 20/06/2014	Conference "Noncommutative geometry and mathematical physics" - Scalea, Italy
09/12/2013 - 11/12/2013	Workshop "Higher Lie Theory" - University of Luxembourg
04/11/2013 - 06/11/2013	Workshop "Algebraic Analysis" - University of Luxembourg
19/08/2013 - 30/08/2013	GEOQUANT school and conference - Erwin Schrödinger Institute (ESI), Vienna, Austria
17/06/2013 - 21/06/2013	2013 VBAC conference "Hilbert schemes, sheaves and representations"
	International School of Advanced Studies (SISSA-ISAS), Trieste, Italy
27/05/2013 - 31/05/2013	Advanced Course on "Compactifying Moduli Spaces"
	Centre de Recerca Matemàtica, Barcelona, Spain
06/12/2012 - 07/12/2012	2012 NoGAGS Meeting - Freie Universität Berlin, Germany
27/06/2012 - 01/07/2012	5th Workshop on "Geometric Methods in Theoretical Physics"
	International School of Advanced Studies (SISSA-ISAS), Trieste, Italy

March 17, 2017   © European Union, 2002-2017 | http://europass.cedefop.europa.eu   Page 6 / 8

18/06/2012 - 22/06/2012	2012 VBAC conference "Geometry and Quantization of Moduli Spaces"
	Centre de Recerca Matemàtica, Barcelona, Spain
27/06/2011 - 01/07/2011	Closing Conference of the "Moduli Spaces program" (2011 VBAC conference 2011)
	Isaac Newton Institute for Mathematical Sciences - Cambridge, UK
26/05/2011	Workshop "Vector Bundles and Coherent Systems"
	Isaac Newton Institute for Mathematical Sciences - Cambridge, UK
11/04/2011 - 15/04/2011	Workshop "Derived Categories"
	Isaac Newton Institute for Mathematical Sciences - Cambridge, UK
03/04/2011 - 01/07/2011	"Moduli Spaces program"
	Isaac Newton Institute for Mathematical Sciences - Cambridge, UK
05/01/2011 - 14/01/2011	School on "Moduli Spaces"
	Isaac Newton Institute for Mathematical Sciences - Cambridge, UK
20/06/2010 - 26/06/2010	2010 "International Category Theory Conference"
	DIMA-DISI, University of Genova, Italy
01/02/2010 - 04/02/2010	5th IST Courses on Algebraic Geometry "Compactifications of Jacobians"
	Istituto Superior Técnico, Lisbon, Portugal

COMPUTER SKILLS

Operating systems
▷ Average knowledge of Linux (Debian, Ubuntu, Fedora and Open Suse)
▷ Average knowledge of Windows (Xp, Vista, 7, 8)

Presentation softwares
▷ PowerPoint, gut working knowledge

MS Office
▷ Good knowledge of Word, Excel and Power Point (and their LibreOffice's counterparts)

Math programs
▷ Good working knowledge of the LaTeX packages (for typesetting, creation of diagrams and presentations)
▷ Basic knowledge of the program Mathematica

Programming languages
▷ C++, R, very good knowledge
▷ Python, SQL, Git, GitHub, intermediate knowledge
▷ XML, JSON, Markdown, Shiny, basic knowledge

LANGUAGE SKILLS

Mother tongue   Italian

Other languages

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	B2[1]	B2[1]	B2[1]	B2[1]	B2[1]
German	C1[2]	C1[2]	C1[2]	C1[2]	C1[2]
French	B1[3]	B1[3]	B1[3]	B1[3]	B1[3]

Levels: A1/A2: Basic user - B1/B2: Independent user - C1/C2: Proficient user
Common European Framework of Reference (CEF) level

[1] FIRST certificate issued by *University of Cambridge* in 2003; current estimated level: C1
[2] Certificate issued by *Sprachenzentrum der Universität Wien* in 2017
[3] DELF A1-A4 certificate issued by *Centre international d'études pédagogiques* in 2003; current estimated level: B2

SKILLS

▷ Good autonomous organization of work and timelines for parallel projects
▷ Ability to identify key features of problems; problem-solving skills
▷ Ability to deliver effective presentations about work results
▷ Ability to collaborate with colleagues, both on-site and abroad
▷

ADDITIONAL INFO

Other certificates   ▷ Certificate of First Aid (issued in 2014 by Croix Rouge Luxembourg)
▷ Driving license (type B)

Blogs   ▷ Culinary blog in Italian: http://ricette.matteotommasini.altervista.org
▷ Culinary blog in English: http://recipes.matteotommasini.altervista.org
▷ Gardening blog: http://giardinaggio.matteotommasini.altervista.org
▷ Blog-notes in Italian and English: http://blognotes.matteotommasini.altervista.org